

REMARKS

Claims 1-21 were previously pending in this patent application. Claims 1-21 stand rejected. Herein, Claims 1, 2, and 4 have been amended. Accordingly, after this Amendment and Response, Claims 1-21 remain pending in this patent application. Further examination and reconsideration in view of the claims, remarks, and arguments set forth below is respectfully requested.

35 U.S.C. Section 102(e) Rejections

Claims 1-21 stand rejected under 35 U.S.C. 102(e) as being anticipated by Roy et al., U.S. Patent No. 6,958,248 (hereafter Roy). These rejections are respectfully traversed.

Independent Claim 1 recites (as amended):

A method of backside navigation comprising:
milling a fine fiducial opening through a substrate with a charged particle beam; and ***endpointing*** said fine fiducial opening ***upon delineating a trench isolation structure to create a registration marker to register an image of said trench isolation structure to a reference image.*** (emphasis added)

It is respectfully asserted that Roy does not disclose the present invention as recited in Independent Claim 1. In particular, Independent Claim 1 recites the limitation, "***endpointing*** said fine fiducial opening ***upon delineating a trench isolation structure to create a registration marker to register an image of said trench isolation structure to a reference image,***" (emphasis added). In contrast, Roy describes endpointing a trench (22) when the trench floor (29) reaches the boundary between the p-substrate (12) and the n-well (10) instead of endpointing upon delineating a trench isolation structure, as in the invention of Independent Claim 1. [Roy; element 60 of Figure 2; Col. 5, line 60 through Col.

6, line 15]. Thus, Roy fails to disclose endpointing the fine fiducial opening upon delineating a trench isolation structure to create a registration marker to register an image of the trench isolation structure to a reference image, as in the invention of Independent Claim 1. Therefore, it is respectfully submitted that Independent Claim 1 is not anticipated by Roy and is in condition for allowance.

Dependent Claims 2-5 are dependent on allowable Independent Claim 1, which is allowable over Roy. Hence, it is respectfully submitted that Dependent Claims 2-5 are patentable over Roy for the reasons discussed above.

With respect to Independent Claims 6 and 15, it is respectfully submitted that Independent Claims 6 and 15 recite similar limitations as in Independent Claim 1. In particular, Independent Claims 6 recites the limitation, "forming a fiducial opening, ***wherein a portion of a trench isolation structure is delineated,***" (emphasis added). Independent Claims 15 recites the limitation, "forming a fine fiducial opening in said coarse fiducial opening, wherein ***said fine fiducial opening delineates a portion of a trench isolation structure,***" (emphasis added). As discussed above, Roy fails to disclose the cited limitations. Therefore, Independent Claims 6 and 15 are not anticipated by Roy and are in condition for allowance for reasons discussed in connection with Independent Claim 1.

Dependent Claims 7-14 and Dependent Claims 16-21 are dependent on allowable Independent Claims 6 and 15, respectively, which are allowable over Roy. Hence, it is respectfully submitted that Dependent Claims 7-14 and 16-21 are patentable over Roy for the reasons discussed above.

Claims 1-3 stand rejected under 35 U.S.C. 102(e) as being anticipated by Talbot et al., U.S. Patent No. 6,518,571 (hereafter Talbot). These rejections are respectfully traversed.

It is respectfully asserted that Talbot does not disclose the present invention as recited in Independent Claim 1. In particular, Independent Claim 1 recites the limitation, "***endpointing*** said fine fiducial opening ***upon delineating a trench isolation structure to create a registration marker to register an image of said trench isolation structure to a reference image***," (emphasis added). In contrast, Talbot describes endpointing a window (310) in the IC device upon exposing the feature of interest (e.g., conductor (120)) for probing instead of endpointing upon delineating a trench isolation structure to create a registration marker to register an image of the trench isolation structure to a reference image, as in the invention of Independent Claim 1. [Talbot; Figures 1A-4B; Col. 6, line 15 through Col. 7, line 25]. Thus, Talbot fails to disclose endpointing the fine fiducial opening upon delineating a trench isolation structure to create a registration marker to register an image of the trench isolation structure to a reference image, as in the invention of Independent Claim 1. Therefore, it is respectfully submitted that Independent Claim 1 is not anticipated by Talbot and is in condition for allowance.

Dependent Claims 2-3 are dependent on allowable Independent Claim 1, which is allowable over Talbot. Hence, it is respectfully submitted that Dependent Claims 2-3 are patentable over Talbot for the reasons discussed above.

CONCLUSION

It is respectfully submitted that the above claims, arguments, and remarks overcome all rejections. All remaining claims (Claims 1-21) are neither anticipated nor obvious in view of the cited references. For at least the above-presented reasons, it is respectfully submitted that all remaining claims (Claims 1-21) are in condition for allowance.

The Examiner is urged to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Please charge any additional fees or apply any credits to our PTO deposit account number: 23-0085.

Respectfully submitted,

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